



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,584	11/12/2003	Ravinder Prakash	CHA920030031US1	6675
23550 7590 02/22/2008 HOFFMAN WARNICK & D'ALESSANDRO, LLC 75 STATE STREET 14TH FLOOR ALBANY, NY 12207			EXAMINER BAYAT, ALI	
			ART UNIT 2624	PAPER NUMBER
			NOTIFICATION DATE 02/22/2008	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOCommunications@hwdpatents.com

Office Action Summary	Application No. 10/706,584	Applicant(s) PRAKASH, RAVINDER	
	Examiner Ali Bayat	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 11/26/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/11/07</u> . | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed on 11/26/07 have been fully considered but they are not persuasive. On page 6-7, in regard to claims 1,7 and 15, of remarks applicant argues, that Gonzales provides a system in which processing of the neighboring pixels is reduced. In particular, quantization levels of neighboring pixels are remapped to provide a reduction in the number of binary representations of the neighboring pixels. (See column 3, lines 46-50.) Nowhere does Gonzales teach (or remotely suggest) reducing sets of original pixels down to a smaller set of scaled pixels.

Examiner respectfully disagrees with applicant, Gonzales provides for reducing sets of original pixels down to a smaller set of scaled pixels (see col. 3 lines 44-50, see the aggregation of re-mapped values provides a reduction in the binary representation of the neighborhood pixels for $M \cdot N$ (or $m \cdot N$) possible history representations (or states) to m history representations (or states), where N is the number of neighboring pixels and m is the number of possible re-mapped values for each neighboring pixels, note the reduction of neighborhood pixels $M \cdot N$ (or $m \cdot N$) to m , where N corresponds to the neighboring pixels , in other word it shows that, the state or history representation of the neighboring pixels change from $M \cdot N$ (or $m \cdot N$) to m , which it means the values of neighboring pixels change (reduced) to m (is the number of possible re-mapped values for each neighboring pixels), which corresponds to reducing sets of original pixels down to a smaller set of scaled pixels.

On page 7, in regard to claims 1, 7 and 15, of remarks applicant argues, that his invention provides a system in which, e.g., two pixels are scaled down to a single pixel in order to scale, i.e., reduce the pixel size of the image.

Examiner respectfully disagrees; this limitation is not disclosed in claim language.

On page 7, in regard to claims 1, 7 and 15, of remarks applicant argues, in Gonzales, the same number of pixels that are inputted are also outputted - there is no reduction in the number of pixels in the image. Instead, Gonzales teaches reducing possible quantization values of neighboring pixels in order to reduce processing required during entropy encoding. This is completely unrelated to the presently claimed application in which pixels are actually eliminated altogether.

Examiner respectfully disagrees, in col.3 lines 44-50, see the aggregation of re-mapped values provides a reduction in the binary representation of the neighborhood pixels for $M \cdot N$ (or $m^{**}N$) possible history representations (or states) to m history representations (or states), where N is the number of neighboring pixels and m is the number of possible re-mapped values for each neighboring pixels, note the reduction of neighborhood pixels $M \cdot N$ (or $m^{**}N$) to m , where N corresponds to the neighboring pixels , in other word it shows that, the state or history representation of the neighboring pixels change from $M \cdot N$ (or $m^{**}N$) to m , which it means the values of neighboring pixels change (reduced) to m (is the number of possible re-mapped values for each neighboring pixels), also not col.4 lines note the aggregated magnitude (state input)

state determined for the neighboring pixels of a subject pixel represents a history or context, for the probabilities of the DPCM value corresponding to the subject pixel.

On page 7, in regard to claims 1, 7 and 15, of remarks applicant argues, that Gonzales does not provide for a bitonal image.

Examiner respectfully disagrees, Gonzales provides a system that operates on a grayscale image, and however the bitonal image is part of grayscale image.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 7-11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Gonzales et al. (US 4,725,885).

In regard to claim 1, Gonzales provides for a scaling system for geometrically scaling the bitonal image (col.3 lines 44-50, note reduction in the binary representation of the neighborhood pixels, corresponds to geometrically scaling the bitonal image), wherein the scaling system reduces contiguous sets of original pixels down to a smaller set of scaled pixels (col.3 lines 44-50, note reduction in the binary representation of the neighborhood pixels); and an encoding system that encodes the scaled bitonal image

using an industry standard technique (Fig.2, element 102, col.7 lines 30-35, note arithmetic and Huffman coders).

With regard to claims 3 and 8 Gonzales provides compression system wherein the scaling system reduces a pair of pixels down to a single scaled pixel based on four pixel values, wherein the four pixel values include the two values of the pair of pixels and two values of two pixels that flank the pair of pixels (col. 9 lines 10-36, see table 2, note the magnitude state corresponding to a pixel X is a unique measure of the activity in the neighboring pixels).

As to claims 4-5 and 9-11, see the rejection of claim 3. They recite similar limitations as claim 3. Hence they are similarly analyzed and rejected.

With regard to claim 7, see the rejection of claim 1. It recites similar limitations as claim 1. Hence it is similarly analyzed and rejected.

As to claim 13, see the rejected claim 1. It recites similar limitations as claim 1. Hence it is similarly analyzed and rejected.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2,6,12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US 4,725,885) in view of Mukherjee (Pub.No. US 2005/0069217).

In regard to claims 2,6,12 and 14, Gonzales provides for gray scale image (col.3 lines 44-50), which is encoded with Arithmetic and Huffman (Fig.2, element 102, col.7 lines 30-35). Gonzales does not provide for a black white image, and CCITT-G4 format for industry standard technique. Mukherjee provides for a black white image (Fig.1 element 12, para.25, lines 1-9, see a binary image, such as "a black and white dot pattern"), and CCITT-G4 format for industry standard technique (para.37 bottom part, see lossless compression format such as CCITT-G4). It would have been obvious to a person of ordinary skill in the art to incorporate the teaching of Mukherjee with the system and method of Gonzales for enhancing text like images, in response to a determination that the pixel block likely contains at least one text-like edge based on a measure of distance separating intensity values respectively representing intensity distributions of the first and second classes and based on measures of peakedness of intensity histograms computed for both the first and second pixel classes(para.8).

Conclusion

4. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Bayat whose telephone number is 571-272-7444.

The examiner can normally be reached on M-F 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on 571-272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number:
10/706,584
Art Unit: 2624

Page 8

Ali Bayat *AB*
Patent Examiner
Division 2624
2/12/08

Matthew C. Bella

MATTHEW C. BELLA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600